NATIONAL LIBRARY OF MEDICINE
NEWS

Vol. XXV, No. 6 Bethesda, Maryland 20014 June 1970

NMAC Reorganized

A reorganization of the National Medical Audiovisual Center in Atlanta, a component of the National Library of Medicine, was announced this month by Dr. Martin M. Cummings, NLM Director. Target date for completion of the reorganization is July 1, 1970.

Its new structuring will allow the Center to meet the rapidly growing demand for use of its unique collection of films and other audiovisual materials dealing with health and medicine. The demand for this service has grown from 40,000 loans in 1965 to over 85,000 in 1970. The change will also place the Center in a closer working relationship with schools of the health professions by providing training courses and conferences on audiovisual techniques and their application to medical education. The facilities of the Center will be available to medical school faculty for the production of selected educational materials. Center staff will also advise on the development of physical facilities for the use of audiovisuals in teaching institutions.

AIM-TWX - A New Experimental Service

The Library's Lister Hill National Center for Biomedical Communications, in conjunction with the NLM Library Operations staff, has initiated a new experimental service called AIM-TWX, to provide rapid, responsive searching of the medical literature.

The bibliographic information published during the last five years in over one hundred journals in clinical medicine has been stored in a large, time-sharing computer in Santa Monica, California, run by the System Development Corporation. The journals covered include those in NLM's new *Abridged Index Medicus (AIM)*. This computer can be called from either TWX terminals or Teletype terminals connected to the telephone network. After placing a call to the computer and signing in with his number, the terminal user receives instructions from the computer, explaining how to search the stored bibliographic information in an ordinary, conversational way. He can search the vocabulary to find appropriate search terms or enter directly subjects, subheadings, dates, authors' names, language, or other search terms. The computer responds by informing him of the number of documents for each term. He can combine terms using "or," "and," and "not" to pinpoint his interest. And, finally, he can print out his bibliography at his terminal or have it mailed to him.

At least five users at once can be guaranteed access to the system. This service is offered from 8:00 AM to 12:00 noon Pacific time (or 11:00 AM to 3:00 PM Eastern time), Monday through Friday. The computer costs are being paid by the Lister Hill Center; the costs of terminals and toll calls are paid by the users. Most users of the system

(Continued on Page 2)

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service • National Institutes of Health

NATIONAL LIBRARY OF MEDICINE
NEWS

Martin M. Cummings, M.D. Director, NLM

Peter K. Monk, Acting Chief, Office of Public Information and Publications Management

Ann R. Lindsay Editor (301-496-6308)
Roger L. Gilkeson Assistant Editor (301-496-3661)
Daniel Carangi Graphics

Published monthly by the Office of Public Information, National Library of Medicine, National Institutes of Health, for health science libraries, the health professions, and news media.

Use of funds for printing this publication approved by the Director of the Bureau of the Budget, January 18, 1963.

8600 Rockville Pike, Bethesda, Maryland 20014

(*AIM-TWX*, from Page 1)

start with available terminals for which there is no additional cost. Costs run from $.20 to $.60 per minute for TWX, and from local call costs to $.45 per minute for phone-system teletypes. An average search runs about 15 minutes and may cost the user up to $9.00.

This experiment is being conducted to identify the need for and usefulness of such services to help medical practitioners in isolated areas, to assist in undergraduate, graduate, and continuing medical education, and to provide information precisely when it is needed for health care. A limited group of practitioners, students, and librarians is being given access to the system so that it will not be overloaded and rejected because of busy signals, and so that a variety of user groups can test it. The experiment is presently scheduled to run through December 27, 1970. For further information on this service, contact:

The Lister Hill National Center for Biomedical Communications
National Library of Medicine
8600 Rockville Pike
Bethesda, Maryland 20014

Support for Addition of New Titles to Union Catalog of Medical Periodicals

In the past, libraries that were using the *Union Catalog of Medical Periodicals* system to develop local or regional union lists would submit new titles not appearing on the then-current printout to the Medical Library Center of New York for establishment on the file. Until this year, no separate charges were made for this activity; rather, the cost of the work was absorbed by the Center. Beginning in this calendar year, however, the Center instituted a system of unit charges for work done under contract with outside organizations and included in this pricing system charges for the establishment of new titles.

It was immediately obvious that the users with the fastest acquisition mechanisms would be submitting new titles first and have to pay the fee for establishment of the bibliographic information on the file, thus in effect penalizing themselves for their speed.

In an attempt to eliminate this inequity, the National Library of Medicine plans to assume the funding for that portion of the fee which relates to the actual establishment of bibliographic information on the file for all titles falling within the national scope of the list, no matter which library submits them to the Center. The contributing library will pay the regular fees for the actions they desire as though the title were already on the file. For titles of purely local interest, because of

either their subject scope or type, the contributing library will still be expected to pay for the establishment of the bibliographic information.

Lister Hill Center Continues Satellite Communications Experiments

In May, electrocardiography (EKG) signals were successfully transmitted between the University of Wisconsin and Stanford University, using the NASA ATS-3 satellite. Human subjects had their EKG signals recorded at the point of origin and then transmitted via satellite. The recording was made at the receiving end and compared with the original recording. Preliminary analysis showed no detectable signal degradation due to satellite transmission.

This continues the series of satellite communications test initiated by NLM's Lister Hill National Center for Biomedical Communications in April (*News*, April 1970). Advanced experimentation has continued, aimed at potentially useful applications for health care and medical education.

Of great interest also to NLM and the Lister Hill Center AIM-TWX experiment (see page 1) was the connection via satellite of eight remote teletype terminals to the time-sharing computer system at Stanford University. In the test, eight Model 33 teletype terminals were connected by phone patch to the satellite VHF transceiver. Elementary school students, accustomed to using the computer terminals to access a computer-assisted instruction package in the computer, used the Model 33 terminals to access the Stanford computer. The students' messages were transmitted via telephone line to the satellite terminal and then to the satellite; the satellite converted the signals and beamed them back to the Stanford satellite terminal. The received signals were transmitted by telephone line to the computer. Signals from the computer reached the students over a reverse path. The satellite communications link functioned as effectively as the ground communications normally used for this purpose.

Finally, the Lister Hill Center arranged for transmission of color photographs via the NASA ATS-3 satellite, using a color photo facsimile send-receive unit. The tests were conducted at Stanford University, which has the only known U.S. unit of the color facsimile equipment; the satellite converted the signals and relayed them back to the Stanford terminal, which fed them into the facsimile receiving unit. The signals produced an image which was captured on color film by a Polaroid camera. The entire process took only about six minutes, and preliminary analysis shows very little loss of quality or resolution in the transmission segment.

The Lister Hill Center will soon participate directly with Stanford in this experiment.

Grants Awarded to Regional Medical Libraries

Dr. Leroy L. Langley, Associate Director for Extramural Programs, has announced the award of grants to Harvard University, Emory University, and the New York Academy of Medicine for continuation support of their Regional Medical Library programs, as well as a grant award to the University of Washington for renewal of support for its RML program.

Grants to other Regional Medical Libraries for continuation or renewal of support will be announced in the *News* as they are awarded.

NMAC Producing Videotapes on Pathology

A continuing series of educational television programs in clinical pathology is in production on the sound stage of NLM's National Medical Audiovisual Center in Atlanta. Fifty-eight videotapes have been completed to date, in cooperation with Dr. Norman Ende, Professor of Pathology, Emory University School of Medicine. In the course of production, experts in specific areas of clinical pathology have come to the Center from all parts of the country to record videotapes on their particular specialties.

The series explores the normal and abnormal mechanisms of the human body on a theoretical biomedical level. Subject areas represented include: Immunology (5 titles), Hematology (15 titles), Enzymology (5 titles), Endocrinology (7 titles), Gastrointestinal Diseases (9 titles), Infectious Diseases (10 titles), and Forensic Medicine (7 titles).

All of the programs are cleared for educational closed-circuit television. The videotapes cannot be loaned, but the Center will duplicate programs without charge on videotape provided by requesters. To secure this service, medical schools and related activities can send a roll of videotape appropriate to one of three modes. The Center will transfer the requested program, and return the videotape within thirty days. Only the following videotape recording modes are currently available:

AMPEX 1100, lowband, two-inch (2-inch) standard broadcast. Playable on standard broadcast videotape recorders. Recorded at 15 ips only.

AMPEX 7500, Helical Scan, one-inch (1-inch) videotape recorded at 9.6 ips. Playable on 7000 series, 6000 series, and 5000 series using standard AMPEX one-inch format.

AMPEX 660 B, Helical Scan, two-inch (2-inch) videotape recorded at 3.7 ips. Playable on 660 series and 1500 series.

Requests for this service and detailed information on the clinical pathology television series should be addressed to: National Medical Audiovisual Center, Atlanta, Georgia 30333, Attn: Videotape Duplicating Service.

Thirty of the programs have been transferred to 16mm motion-picture film and the rest of the series will ultimately be available in this form. For information on short-term loan of 16mm prints, address: National Medical Audiovisual Center (Annex), Station K, Atlanta, Georgia 30324.

By August 1970, 16mm prints of the clinical pathology programs will be available for purchase. Films may be purchased from: General Services Administration, National Archives and Records Service, Washington, D. C. 20209, Attn: Government Film Sales.

Summer Hours: June 8 - September 5

Reading Room: Monday-Saturday, 8:30 a.m. - 5:00 p.m.
History of Medicine Division: Monday-Saturday, 8:30 a.m. - 4:45 p.m.
The Library is closed on Sundays.

New MEDLARS Class Begins

Listed below are the people attending the MEDLARS training course which began on June 1; lectures on indexing are under the direction of Mrs. Thelma G. Charen, Index Section, BSD, and those on search, Dr. Linn Kelner, MEDLARS Management Section, BSD.

Miss Angeline Durso	UCLA MEDLARS
Miss Barbara Greehey	NLM Library Associate
Dr. Peter Heelein	DIMDI, Cologne, Germany
Miss Mary Kralicek	John Crerar Library, Chicago
Mrs. Dianne Magidson	NIH Library
Miss Ruth Marcolina	New York Academy of Medicine
Miss Marilyn Miller	University of Alabama MEDLARS
Mr. Atsutake Nozoe	Keio University, Tokyo
Miss Frances Solomon	Harvard MEDLARS, Boston
Mrs. Ruth Stander	NLM, Index Section
Dr. Sylvaine Malinge	INSERM, Paris
Mrs. Mary Herner	Herner & Co., Washington
Mr. James Loizou	Herner & Co., Washington
Miss Lynn Ockerman	Herner & Co., Washington
Mr. Roman Kos	Franklin Institute Research Laboratories Philadelphia
Mr. Andrew Ojada	Franklin Institute Research Laboratories
Mr. Hans Janecka	Scientific Literature Corp., Philadelphia
Miss Judy John	Scientific Literature Corp., Philadelphia
Mr. Stanley Zdziechowski	Scientific Literature Corp., Philadelphia

Biomedical Communication Directors Meet

Directors of biomedical communication from 32 medical centers and schools of medicine in the United States and Canada met in Atlanta, Georgia on June 8 and 9 to confer on biomedical communication programs, problems, and resources. The meeting was sponsored by the National Medical Audiovisual Center, a component of the National Library of Medicine.

During recent years there has been a phenomenal growth in the application of modern communication technology to biomedical teaching. One such application is the Community Medical Television System, first of its kind, begun in Atlanta in 1967 under the leadership of the National Medical Audiovisual Center to link medical teaching institutions and hospitals within a 25-mile radius. Of the numerous medical schools which have started biomedical communication programs, about 42 now have full-time directors of communication.

In announcing the conference, Jerome K. Barnett, Acting Director of the National Medical Audiovisual Center, said: "Considerable confusion exists regarding the present status of biomedical communication programs and their relation to other components of their institutions. The time seems right for a systematic investigation of problems common to those working in this area."

Among topics considered by the conferees were: systems and resources available to participating institutions; financing of communication programs, with emphasis on sources of funding; and programs for the exchange of audiovisual teaching materials between institutions or medical complexes.

(Continued on Page 7)

Personnel

On June 1, Dr. Henry M. Kissman was detailed from the Food and Drug Administration to head the Toxicology Information Program of the Library's Specialized Information Services. He replaces Dr. Charles N. Rice, who resigned from government service to take a position in private industry. Dr. Kissman earned a Ph.D. in organic chemistry at the University of Rochester in 1950; he worked from 1950 to 1952 at the National Heart Institute, NIH, and from 1952 to 1967 at the Lederle Laboratories Division of American Cyanamid Company. Since 1967, Dr. Kissman has served as Director of FDA's Science Information Facility. His professional affiliations include membership in the American Chemical Society, The Chemical Society (London), the American Society for Information Sciences, and the Drug Information Association.

Also reporting to the Library on June 1 from the Food and Drug Administration were Mr. Bruno Vasta and Mr. Donald Hummel. Mr. Vasta, who holds degrees in chemistry and biochemistry, comes to SIS from a post as Supervisory Chemist and Information Specialist in the Science Information Facility. Mr. Hummel, a biologist who served at FDA as a Supervisory Computer Systems Analyst, will work on SIS data file problems.

MEDLARS II Project Report

by Lillian N. Washington, MEDLARS II Task Force Coordinator

The Detailed Procedural Design for the MEDLARS II INITIAL System, consisting of four volumes arranged in eight sections and three appendices, has been submitted to the National Library of Medicine. This design will serve as the framework, or roadmap, for the implementation of MEDLARS II in a batch processing mode. The INITIAL System is now scheduled for operational acceptance in October 1970.

The INITIAL System will be implemented on an IBM 360/50 computer. Input will be accepted from either the Keymatic 1093 Encoder (magnetic tape) or the IBM 029 Keypunch (cards). Output will be from the High Speed Printer, the PHOTON 713-100, or the Linotron 1010 which is part of the Government Printing Office photocomposing system.

The Detailed Procedural Design is undergoing intensive review by NLM staff. Meanwhile, detailed PERT schedules are being revised and consolidated into a master schedule. This schedule is to serve as a checklist to assist in ensuring that all necessary actions have been accounted for so that the INITIAL System can be accepted as completely operational by the target date.

The first two sections of the Detailed Procedural Design include the purpose of the document, the organization of the document, and a summary of each subsequent section. Section III references the Functional Requirements as set forth in the Overall Design Specifications and defines the requirements that will not be implemented until the EXTENDED, or on-line, System.

Section IV, the Design Description for the INITIAL System, includes flows, procedures, and computer processing requirements necessary to establish the capabilities of the MEDLARS II INITIAL System. The flows are segmented into the four functional modules that will be directly supported by the INITIAL System: receiving and routing; cataloging and indexing; vocabulary control; and information retrieval and publication.

(Continued on Page 7)

(*MEDLARS II*, from Page 6)

Section V and Appendix A describe the file design for the files identified for MEDLARS II. Among the eleven files, the principal ones include: indexed citation files, item files, vocabulary files, name authority files, query files, and format files.

Section VI, Input Requirements, specifies the methods for data presentation to the INITIAL System. Included are recommended general procedures for use of the input devices, and input forms (including instructions for their use). The forms and procedures are now being reviewed by Library Operations staff. Each form is also undergoing an actual usage test with data supplied by indexers, vocabulary specialists, etc. That data is then converted to machine-readable form, using the designated input device.

Section VII and Appendix C specify the output processing requirements for the INITIAL System, such as devices to be supported, output items to be supported by specific devices, general format requirements, and the detailed format specifications for the following types of output: standard publications (e.g., *Index Medicus, Current Catalog, List of Journals Indexed*), recurring bibliographies, literature searches, demand searches, desk-top tools, standard system output listings, and statistical output data.

Section VIII, Performance Requirements for the INITIAL System, sets forth the timing estimates based on projected workloads for fiscal year 1971, and the processing characteristics of the system. This section is incomplete since, to date, the publication activity has not been described.

Appendix B, MEDLARS II Vocabulary, includes a conceptual design for the MEDLARS II vocabulary, together with implementation information specific to the INITIAL System. The vocabulary concept for MEDLARS II is one of the major changes to be included in the new system. This concept will be written up in the near future.

MLA Issues Call for Contributed Papers

The 70th Annual Meeting of the Medical Library Association will be held in New York City, May 30-June 3, 1971. The General Session on Thursday, June 3, will be devoted to a group of contributed papers. No special theme for this session is planned. The Program Committee wishes to select the best possible papers dealing with new ideas and methodologies, as well as information reports of activities and programs of general interest to all medical librarians.

A letter of intent to submit a formal paper for consideration, accompanied by a short abstract, should be sent by September 1, 1970 to: Alfred N. Brandon, Librarian, Mount Sinai School of Medicine, Fifth Avenue and 100th Street, New York, New York 10029. The deadline for submission of completed papers is February 1, 1971.

(*Biomedical Communications*, from Page 1)

Schools and medical centers represented at the conference included Baylor University, the University of South Dakota, Syracuse University, the University of Georgia, Duke University, New York University, the Medical College of Virginia, and others.

Current Catalog Proof Sheets

The Medical Library Association is now accepting orders for *Current Catalog Proof Sheets (News*, April 1970), which it will issue in cooperation with NLM beginning July 1.

The price for the twice-weekly issues is $12.50 for the period between July 1 and December 31, 1970, and $25.00 for a full year's subscription beginning in January 1971. Orders or requests for sample copies should be addressed to the Medical Library Association, 919 North Michigan Avenue, Chicago, Illinois 60611.

New NLM Literature Searches

Single copies of the following new bibliographies are available on request to the Literature Search Program, Reference Section, National Library of Medicine, 8600 Rockville Pike, Bethesda, Maryland 20014. Please request the searches by both number and title. (A complete list of available searches is published monthly in *Index Medicus.)*

L.S. No.	Title
70-30	Automation or use of computers in laboratory diagnosis. January 1968-April 1970. (419 citations)
70-31	Teaching aids in special education. January 1967-May 1970. (116 citations)
70-33	Antilymphocyte serum - human applications. January 1967-April 1970. (168 citations)
70-34	Gastrin release. January 1967-May 1970. (86 citations)

Tribute to Senator Hill

A sculptured head of former United States Senator Lister Hill of Alabama has been loaned to NLM by Mrs. Albert D. Lasker of New York City. Senator Hill was for many years a strong advocate of improved and enhanced biomedical communications. The sculpture, by Robert Berks, is in the public catalog area of the Library.

In her letter to Dr. Martin M. Cummings, NLM Director, Mrs. Lasker asked that NLM retain the sculpture until the Library's Lister Hill National Center for Biomedical Communications Building is completed. Plans call for the new building to be erected adjacent to the National Library of Medicine.